

---

# A5000/RISC OS 3

## Release Note

---

### Contents

|                                              |    |
|----------------------------------------------|----|
| Introduction                                 | 3  |
| Aspects of using RISC OS 3                   | 3  |
| Configuration of the system                  | 6  |
| Points to watch out for                      | 8  |
| Upgrading from RISC OS 2                     | 15 |
| Compatibility issues                         | 17 |
| Printers                                     | 21 |
| Known problems with third party applications | 22 |
| Report form                                  | 23 |



## Introduction

This release note describes

- features of the operating system which have not been covered in the manuals
- upgrading from older versions of RISC OS
- operational aspects which allow users to make the best use of their system
- known problem areas within the hardware and software.

Acorn is in the process of actively developing the RISC OS operating system that controls your A5000. We have taken care to ensure that the system operates correctly; however any product as complex as RISC OS 3 will inevitably contain faults. If you return the registration form supplied with the computer you will be notified in due course of the availability of upgrades to the software during 1992.

This A5000 system has not been tested for use in safety critical applications.

You must not copy the A5000 ROM image. It will not operate successfully on non-A5000 computers.

## Aspects of using RISC OS 3

### Using !System and !Scrap

Previous releases of RISC OS contained a !System directory which had two main functions. It was used as a location to hold system resources (relocatable modules), which could be loaded as required by applications, and also as a location where temporary files could be created and deleted as necessary by applications.

In RISC OS 3 these functions have been separated into two independent applications, !System and !Scrap.

- !System contains the system resource modules as before.
- !Scrap is used for temporary files.

With non-networked hard disc systems both !System and !Scrap should be stored at the top-level (root) of the hard disc. You should open this directory as a matter of course before running any other applications.

Where a hard disc system is networked, the arrangement depends on whether or not communal applications are loaded from the network. If applications are not loaded from the network, the system is set up as above. If applications are loaded from the network, then the !System should reside on the network where it can be centrally updated, while !Scrap should reside as before, on the local hard disc.

## **Adding new fonts**

RISC OS 3 can support a number of different Fonts directories being used simultaneously. This makes adding new fonts to the system very easy – whenever directories of fonts are seen, they can be accessed.

Where an application provides additional fonts, the two directories can be merged by opening both !Fonts directories with a Shift-double click and copying the font directories (only) from the application to the user's master font directory. However this is simply a matter of convenience as you can group all fonts in a single directory or partition them by use as you choose.

You must not use a pre-RISC OS 3 !Fonts application with RISC OS 3. To use the fonts contained in an old type !Fonts application, they must be moved over into a new type !Fonts application. The RISC OS 3 User Guide shows you how to do this.

## **Auto monitor detection**

To guarantee that a display will appear on your monitor regardless of its type (TV, VGA, SuperVGA or MultiScan) the system as initially supplied will start up in MultiScan mode on SuperVGA monitors.

MultiScan is the correct monitor type for the Acorn MultiScan monitor.

## Super VGA monitors

The !Configure application does not set the monitor type for SuperVGA monitors correctly.

If you have a SuperVGA monitor you should change the monitor type as follows:

- 1 Press the F12 key.
- 2 At the \* prompt, type `configure monitortype 4`
- 3 Press the Return key.
- 4 Go back to the desktop by pressing the Return key again.

## **Configuration of the system**

Various aspects of the system are configurable to allow you to optimise the settings of the machine to fit your particular pattern of use.

### **Font cache**

If you are making extensive use of the outline fonts, say using a DTP application, then a larger font cache size may be desirable. There is a trade off between the size of the font cache and the speed of display and printing of outline fonts. A more suitable size for the font cache, for heavy font use, would be 256K. This setting can be adjusted from the Font cache entry in the Memory allocation dialogue box of the Configure application.

### **Configurable bitmap size**

The way in which characters are printed and displayed is controlled by the option 'Use cached bitmaps for characters' in the Fonts dialogue box of the Configure application.

Characters smaller than the cached bitmaps value are converted to bitmaps whereas larger characters are drawn directly from outlines.

If you set the cached bitmaps value to a high value, the cacheing of large characters can take over the whole cache causing the smaller characters to be removed. The smaller characters will have to be cached again when needed. This effect can slow down printing and the display.

The value for 'Use cached bitmaps for characters' should be set to the size of the bulk of the text in any particular document. Thus if the Draw example document is to be printed, the setting should be adjusted to 12 point. Character larger than this are not cached and so do not affect the cached characters.

However for some documents which contain large stretches of large characters this will slow down printing significantly.

## New printer drivers

The printers supported fall into three categories; dot-matrix, LaserJet and PostScript. If you do not use any printers of a particular category, you can reduce the amount of memory used by !Printers by deleting the relevant directory inside !Printers. For dot-matrix printers it is the **dp** directory. For LaserJet printers it is the **lj** directory. For PostScript printers it is the **ps** directory. Make a backup copy of !Printers before you make this alteration.

## **Points to watch out for**

### **Multiple filer operations**

Running two filer operations on the same files simultaneously can have unexpected results.

For instance, you could start an operation to delete the contents of a directory and, at the same time, start another operation to copy a file into that same directory. Then whether the file is actually present in the directory, after both operations have completed, depends on the detailed timing of the two operations. The copy may have taken place either before or after that point in the directory was reached by the deletion. If you have any doubt as to whether two operations will interfere, it is safest simply to run them in sequence.

### **Different time zones between machines**

RISC OS 3 has been enhanced to understand the concept of time zones. In the situation where RISC OS 2 and RISC OS 3 machines are used side by side there is potential for loss of data when interchanging files back and forth.

Both machines will display the same time to the user; however the RISC OS 3 machine operates with a GMT clock and a time zone setting, whereas the RISC OS 2 machine operates purely its own local time. During British Summer Time a file time-stamped on RISC OS 2 would have the BST time stamp whereas the RISC OS 3 machine would stamp the file with a GMT time. Thus if a file is written on a RISC OS 2 machine, modified on a RISC OS 3 machine and moved back to a RISC OS 2 machine all within the same hour the date stamp of the original file will be later than the date stamp of the modified version.

This scenario can cause problems if you try to copy files with the Newer option set. If, using the procedure described above, you try to copy a file with the Newer option set, the old file would not be replaced by the newer one.



## **Dismounting a disc during a filer operation**

You must not dismount a disc during a filer operation on that disc. Doing so will cause a 'Handle is either illegal or has been closed' error message and you will have to click on the Restart option to start the filer operation again.

## **Mapping fonts using the FontPrint application**

Mapping a RISC OS font to a resident font in a PostScript printer may be accomplished by entering the font's PostScript name into the relevant menu of !FontPrint. This should be automatically successful for most alphabet fonts; for symbol fonts its success depends on the availability of an encoding file. The encoding tells the system which PostScript glyph to render for each ASCII character code.

The encoding file should be given the name "Encoding" and placed in the same directory as the font's Outlines and IntMetrics files. It should contain exactly 256 lines of the form

```
/glyphname
```

where a glyph called "/glyphname" is known to exist in the printer font. Non-existent glyphs should be entered as "/.notdef".

If a particular glyph name is the Nth entry in the encoding file, then that glyph will be rendered for character code N.

Mapping a RISC OS font to a font that has been permanently downloaded into the printer (using the facilities of !FontPrint) is not currently implemented.

## **Screen blanking**

If your computer produces a sound while the screen is blanked, the screen will flash as the sound is heard. This can be a useful indication if your Alarm goes off while your screen is blanked.

## **Possible data corruption when using ADFS buffers**

There is a slight chance that data may become corrupted or errors provoked when using ADFS buffers. It is recommended that you set ADFS buffers to zero by typing:

```
*Configure ADFSBuffers 0
```

For situations where no critical data is being handled, you may benefit from an increase in performance if you set ADFS buffers to eight by typing:

```
*Configure ADFSBuffers 8
```

Note that switching on your machine with 'R' or 'Delete' pressed resets ADFSBuffers to eight.

For more details see the Appendix *Resetting and power-on* in the RISC OS 3 User Guide.

To restore ADFSBuffers to zero, repeat the above configure command after such a power-on.

## **The !Configure application**

Some of the !Configure options are not 'instant effect' options and require the machine to be rebooted before the options take effect. For example, the ArthurLib option in the Net window and all the Memory options only take effect after rebooting.

Any !Configure options that require you to type in a number must be followed by pressing Return.

If you change the settings in the Mouse options window to values that are wildly different from the defaults, you may experience odd behaviour from the keyboard and mouse. Cure this by changing the mouse options back to the defaults.

If you have a non-Acorn SCSI card fitted, you should **not** use !Configure to alter the number of drives, as the usage of CMOS RAM varies between manufacturers.

## **Continuing after a Format/Verify failure**

If a fault occurs during formatting, the fault is flagged and you are asked if you want to continue. Click on Continue to continue the verify process. This marks the sector as defective and moves on. If you don't want to continue with the Verify, click on the window's close icon.

## **Power on self test**

There is an automatic power on self test carried out whenever the computer is powered on. This displays a red screen followed by a blue screen if the test passes.

## **Greyed out menus**

RISC OS 3 allows you to traverse some greyed-out menu options. Greyed out menus contain a set of options that are not currently applicable and can therefore not be selected. However, you cannot display greyed out dialogue boxes.

## **Some iconised applications do not display a menu**

Some iconised applications, for example Impression, do not display a menu when using Shift-Menu. You can make Impression documents display this menu if you set the documents up so as not to show page rulers.

## **Deleting invalid DOS partitions**

If you have an invalid DOS partition that you wish to delete, you must first change the file type of the partition to Data using the command line command \*SetType. Use:

```
*SetType <Filename> data
```

An invalid DOS partition is a DOS file that has been created but not DOS partitioned or formatted.

## **Illegal DOS files**

Do not create files under DOSFS whose names are of the form '/xxx'. These names are illegal under DOS and although DOSFS will allow them to be created, they will be invisible and inaccessible.

## **Using RMFaster**

If you RMFaster a ROM-based C application, it kills the application but gives an error message saying you shouldn't. To get the application back, you need to RMReinit it, or alternatively reboot the computer.

## **Moving multiple files between floppy discs**

If you are using a computer that only has a single floppy disc drive, we recommend that you do not Move multiple files from one floppy disc to another as the computer will ask you to make multiple disc changes. You should first Copy the files to the new disc and then go back and Delete the files on the original disc.

## **!Fonts Sidney encoding**

The !Fonts application has within it a Sidney directory that contains a Sidney encoding but does not contain any font information. The encoding allows files that contain Sidney symbols to be printed on a PostScript printer. However, these symbols will not be visible on screen.

If you have a copy of the full Sidney font you should copy the contents of the Sidney font directory into the Sidney directory containing the encoding. Do not delete the encoding file.

## **Displaying Free space information with SCSI discs**

Because of the way the ROM on the Acorn SCSI expansion card operates, the windowed version of the Free space is not displayed; instead you get the RISC OS 2 display. This can be fixed by using the SCISIFiler module that resides in the !System modules directory.

You should put the following line into your !Boot file (after referencing !System) and ensure that it is run each time you reboot your computer.

\*RMEnsure SCSIFile 0.24 RMLoad System:Modules.SCSIFiler

### **LaserJet III printers**

When using the LaserJet III to print in grey scale mode, the LaserJet printer driver will sometimes append noise (small dots) to the righthand side of the images printed.

### **Pinboard backdrop palette**

The Pinboard backdrop displays some sprite files with the wrong colours. You can cure this by loading the sprite into !Paint and then clicking on the Palette option in the Edit submenu. Save the sprite, and this time backdrop will display the sprite correctly.

### **\*Format**

Illegal characters (e.g. # , . ) are accepted as part of a disc name by \*Format, but result in a disc which cannot be accessed. Their use should be avoided.

### **\*Copy**

\*Copy with the P option no longer works. Either use a RAM disc as the intermediary or use the desktop for copying.

### **Using S and L format discs**

There are problems with using Master S format and single sided L format discs. Their use should be avoided.

### **MailMan**

!MailMan does not send mail to recipients listed in the CC: field when !MailMan is delivering the mail, nor does acknowledgement of delivery work.

## **Draw**

When printing a drawfile, always ensure that !Printers is not currently printing text at the same time. If it is you will get the error 'File open'.

## **\*Title**

The \*Title command is currently not implemented. This is also true within the 6502 emulation.

## Upgrading from RISC OS 2.00

The following aspects need to be considered if you already have a RISC OS 2 machine:

### **!System**

You may need to move modules installed in the !System.modules directory from the RISC OS 2 to RISC OS 3 system. To do this:

Open the !System applications by Shift-Double-clicking on both of the !System applications, then copy the contents of the old !System.modules into the new !System.modules. Many of the modules supplied or licensed by Acorn which previously needed to be loaded from disc are now present in the ROM. There is no need to copy over versions of the following modules:

| Module                    | Filename   |
|---------------------------|------------|
| ● Shared C Library        | Clib       |
| ● Colour Translator       | Colours    |
| ● Floating Point Emulator | FPEmulator |
| ● Outline Font Manager    | Fonts      |
| ● Messages lookup         | MsgTrans   |

If you have floating point hardware, you will need to copy version 3.40 of the floating point emulator into the modules directory and then ensure that this is loaded over the ROM version.

### **Updating !Fonts**

If a !Fonts directory was written for use with RISC OS 2 then it will not work with RISC OS 3 because the Boot and Run files of such font directories are not appropriate for RISC OS 3.

In order to use an old !Fonts directory with RISC OS 3:

- 1 Shift double click on the old !Fonts directory. A directory display will appear, containing a Run file and a Boot file (and the fonts themselves).
- 2 Shift double click on the !Fonts directory from the RISC OS 3 Applications disc 1. A similar directory display will appear.

- 3 Drag the Run file in the second directory display, into the first directory display.
- 4 Drag the Boot file in the second directory display, into the first directory display.
- 5 Reset your computer.
- 6 Display the directory containing your !Fonts directory.
- 7 Start !Chars. Click Menu over the Chars window, the ROM fonts, and the fonts in your font directory, should all be available.

If your fonts directory contains fonts that duplicate those in the ROM, the ones on disc are used in preference (in case they are newer or better in some way). If this occurs, Shift-double-click on your !Fonts directory and delete (or move to a safe place) any directory named Trinity, Corpus or Homerton.

The applications Draw, Edit and Chars refresh their font menus instantly when the list of fonts available changes – there is no longer a need to quit and restart those applications.

If you accidentally use a pre-RISC OS 3 type !Fonts, you will no longer be able to use any of the ROM fonts. The only way to cure this problem is to reboot the computer.

### **Using !Fonts on a network server**

If you have a network server that is serving both RISC OS 2 and RISC OS 3 computers there are some restrictions on the use of the new !Fonts application. You should contact Customer Support and request the 'RISC OS 3 !Fonts technical support note'.

Contact Customer Support at:

Customer Support  
Acorn Computers Limited  
Fulbourn Road  
Cambridge  
CB1 4JN



## Compatibility issues

Significant efforts have been undertaken to maintain compatibility of applications between RISC OS 2 and RISC OS 3. However there are some unavoidable differences.

### Hardware compatibility

There are significant hardware differences between the A5000 computer and the previous A300, A400, A500 and A3000 computers. Compatibility problems are possible in the following areas:

#### Performance

The raw performance of an ARM3 computer is around three times that of an ARM2 computer. This can cause problems with certain games which do not adjust their speed according to the performance of the machine. This can often be partially alleviated by running the following command sequence before starting the game:

- 1 Press F12 to enter command line
- 2 Type \*Cache Off and press Return
- 3 Press Return again to get back to desktop.

Repeat the sequence with \*Cache On to return the machine to its faster state.

#### VGA display modes

VGA screen modes (25,26,27 and 28) with multi frequency monitors and any screen modes with VGA monitors have a screen refresh rate of 60Hz rather than 50Hz. This can upset some games' timing so that they run too rapidly.

#### Sound changes

In VGA modes, sound is approximately one semitone higher than is normal in other modes. The sound will also play about 5% faster.

### **Peripheral architecture**

The peripheral system on the A5000 uses a PC integrated I/O chip the Chips & Technologies 82C710. This has the following effects:

- Any software which performs direct access to the hardware will no longer function correctly. This is normally only a problem with applications which demand dongles or with disc protection techniques which rely on hardware features of the old floppy disc controller.
- Split baud rate serial operation is no longer supported. This affects users who wish to access Prestel-like V23 systems with old non-speed buffering modems.

### **External floppy discs**

If an external 5.25" disc is added to an A5000, the hardware is only capable of reliably accessing 1.2Mb IBM PC format discs, not 360K or 720K.

### **Software compatibility**

There are a number of relatively small changes between RISC OS 2 and RISC OS 3 which may change how your applications look or behave. These will normally not stop your software working. An example might be that formerly you could click beyond the end of text to put the caret at the end but now you must click exactly at the end. Another example might include slight changes to the appearance of window borders.

### **Acorn PC emulator**

To run the Acorn PC emulator, the A5000 computer requires version 1.7 or later of the Acorn PC emulator product. Contact your Acorn dealer for more information.

PC emulator version 1.6 or earlier will not work with RISC OS 3.

### **Desktop C and Desktop Assembler's !Find and PC partitions**

!Find from the Acorn Desktop C and Acorn Desktop Assembler products, fails on seeing a PC partition file.

### **Applications that use the serial port**

Some RISC OS 2.00 applications which interface with the serial port do not work correctly on RISC OS 3, due to changes in the specification of the buffer vectors. The SerialUtils module allows some of these applications to work again.

If you have an application written for RISC OS 2.00 which uses the serial port, you should first test it without loading the SerialUtils module.

If the application fails to work correctly, you should then switch your machine off and on again, load the SerialUtils module, and then try running your application.

To load the SerialUtils module, double-click on the file 'SerialUtil' in the Modules directory in !System.

### **The support disc**

There are some slightly more serious problems with some applications which require correction. The support disc contains some "patch" applications to do this; these are described below.

If you encounter any software that does not run correctly on RISC OS 3, we advise you to contact the software supplier and ask for help. Please make it clear to them that you are using RISC OS 3.

The support disc contains the applications !Patch and !PatchAce to cure minor problems with some software caused by changes between RISC OS 2 and RISC OS 3.

#### **!Patch**

If you use Acorn Desktop Publisher or the TCP/IP Protocol Suite, the !Patch application will ensure these applications run correctly under RISC OS 3

To patch an application, double click on !Patch to start it, then drag the application directory to be patched onto !Patch on the icon bar. A window will be opened containing the file to be patched. Select this file, menu in this window, and choose "Patch selected".

If you have purchased the TCP/IP Protocol Suite, you will need to apply !Patch version 1.03. This contains a patch to Internet that allows NFS to work in a Task window. If your support disc contains an earlier version of !Patch contact Acorn Customer Support.

### **!PatchAce**

!PatchAce is an application to do a minor fix to !Euclid, !Splice and !Tween for RISC OS 3.

Simply display the discs that have these applications on them, then run !PatchAce, and it will do the rest. Make sure that the discs you use are not write protected. The error 'Data lost' indicates that a disc is write protected.

If you have any difficulties with the procedure above then send your master disc for update to:

Ace Computing  
27 Victoria Road  
CAMBRIDGE CB4 3BW  
Tel: (0223) 322559 Fax: (0223) 69180

### **New command line abbreviations**

RISC OS 3 uses a different set of command abbreviations to those used in RISC OS 2.00.

For example, the abbreviation for BASIC used to be \*ba., it is now \*bas.

If you want to use the RISC OS 2.00 set of abbreviations, double-click on the **Commands** file contained on the support disc.

Software that has been written using the RISC OS 2.00 abbreviations may not work correctly with the RISC OS 3 set of abbreviations. If you have a problem with software not functioning correctly try restoring the RISC OS 2.00 set of abbreviations before running the software.

This problem is normally only seen with games titles; one symptomatic error message is 'Bad Parameters' on running the program.

## Printers

Printer definition files are provided for the following printers. If your printer does not have a definition file you will probably find that it will work with one of the other definition files listed here.

Acorn JP-150.

Apple LaserWriter, LaserWriter Plus, LaserWriter II NT and LaserWriter II NTX.

Canon BJ-10e, Canon.BJ-130e, BJ-300 and BJ-330.

Citizen Swift-24.

Epson FX-80, FX-85, JX-80, LQ-850, LQ-860, LX-86, MX-80II, MX-80IIa and MX-80III.

Generic PostScript and Text printers.

Hewlett-Packard LaserJet II, LaserJet III, LaserJet IID, LaserJet IIID, DeskJet, DeskJet+.

IBM Pro-X24E, 4216, 4019/17 and 4019/39.

Integrex Colourjet 132.

Linotronic 100 and 200.

NEC P6 plus and other 24 pin NEC printers.

Olivetti JP-350<sup>†</sup>.

QMS Colourscript 100.

Qume ScriptTEN and CrystalPrint publisher.

Star Gemini-10, DP-150 and LC-10.

Texas Instruments OmniLaser.

<sup>†</sup> Where the A5000 is used with the Olivetti JP-350 printer and a full IBM-PC Centronics cable is used, the printer will lock up if it is powered up before the A5000. This problem is avoided by powering up the computer before the printer.

For more information regarding the printer definition files read the ReadMe files contained in each subdirectory of the printers directory.

## **Known problems with third party applications**

### **TinyDraw**

When TinyDraw is set up to print to a file, invoking the Print option in TinyDraw causes the computer to hang.

### **Inspiration**

The Inspiration !Run file contains a line that instructs the program to RMKill IRQUtils on exiting the program. This could lead to problems with RISC OS 3.

Backup the application, and then using the backed up copy, delete the offending RMKill line from the applications !Run file. Now run Inspiration as normal.

### **Stracker**

Later versions of the soundtracker module by Hugo Fiennes do not work when used in conjunction with VGA or SuperVGA monitors.

### **DiscTree**

DiscTree will fail if you try to access drive 5. You will then have to reboot your computer.

### **Timewatch**

Timewatch from Mitre software gives an error under certain circumstances. You will then have to reboot your computer.

### **Fireball II and E-Type**

These and some other games play too fast. Turn off the ARM3 cache to slow the games down.

### **Folio font**

The Folio font as supplied as a DTP demonstration with the October 1991 issue of Acorn User causes repeated 'Font cache full' errors. Do not use this font with RISC OS 3.

# Report Form

A5000/RISC OS 3 Release notice  
Issue 2 - 0492,045

Use this form to report problems that you find in the hardware or software.  
Your comments will be taken into account in future products.

**What is the exact configuration of your computer:**

RAM memory:  
Hard disc drives:  
Expansion cards:  
Monitor type:  
Monitor configuration:  
Other:

**Provide a summary:**

If there is not enough room for your comments, please continue overleaf

How would you classify your experience with computers?

☐

**First-time user**

☐

**Used computers  
before**

☐

**Programmer**

☐

**Experienced  
Programmer**

*Cut out or photocopy and post to:*  
Dept A5000  
Customer Support  
Acorn Computers Limited  
Fulbourn Road  
Cambridge  
CB1 4JN

**Your name and address:**

This information will only be used to get in touch with you  
in case we wish to explore your comments further

**Further comments.**

Copyright © Acorn Computers Limited 1991  
Published by Acorn Computers Limited  
Part number 0492,045  
Issue 2 November 1991